

LISTING OF CLAIMS

1. (Currently Amended) A synthetic nucleic acid molecule comprising at least 300 nucleotides of a coding region for a reporter polypeptide which has at least 90% amino acid sequence identity to a reporter polypeptide encoded by a wild type nucleic acid sequence, wherein the codon composition of the synthetic nucleic acid molecule is different at more than 25% of the codons from that of the wild type nucleic acid sequence, wherein the codons that are different are mammalian codons selected to result in the synthetic nucleic acid molecule having at least 3-fold fewer of a combination of different mammalian transcription factor binding sequences, and optionally a reduced number of intron splice sites, poly(A) addition sites or prokaryotic 5' noncoding regulatory sequences relative to the wild type nucleic acid sequence, wherein the wild type nucleic acid sequence and the synthetic sequence encode luciferase, and wherein the synthetic nucleic acid molecule has at least 99% 95% nucleotide sequence identity to SEQ ID NO: 9, SEQ ID NO: 16, SEQ ID NO: 18, SEQ ID NO: 297, SEQ ID NO: 299, or SEQ ID NO: 301.
- 2-23. (Canceled).
24. (Previously Presented) The synthetic nucleic acid molecule of claim 1 wherein the synthetic nucleic acid molecule is expressed in a mammalian host cell at a level which is greater than that of the wild type nucleic acid sequence.
- 25-34. (Canceled).
35. (Previously Presented) A plasmid comprising the synthetic nucleic acid molecule of claim 1.
36. (Previously Presented) An expression vector comprising the synthetic nucleic acid molecule of claim 1 linked to a promoter functional in a cell.
37. (Previously Presented) The expression vector of claim 36 wherein the synthetic nucleic acid molecule is operatively linked to a Kozak consensus sequence.

38. (Original) The expression vector of claim 36 wherein the promoter is functional in a mammalian cell.
39. (Original) The expression vector of claim 36 wherein the promoter is functional in a human cell.
40. (Canceled).
41. (Original) The expression vector of claim 36 wherein the expression vector further comprises a multiple cloning site.
42. (Previously Presented) The expression vector of claim 41 wherein the expression vector comprises a multiple cloning site positioned between the promoter and the synthetic nucleic acid molecule.
43. (Previously Presented) The expression vector of claim 41 wherein the expression vector comprises a multiple cloning site positioned downstream from the synthetic nucleic acid molecule.
44. (Previously Presented) An isolated host cell comprising the expression vector of claim 36.
45. (Previously Presented) A kit comprising, in suitable container means, the expression vector of claim 36.
- 46-80. (Canceled).
81. (Previously Presented) The synthetic nucleic acid molecule of claim 1, wherein the transcription factor binding sequence is at least 5 bases in length.
- 82-85. (Canceled).
86. (Currently Amended) The synthetic nucleic acid molecule sequence of claim 1 wherein the selection of mammalian codons also reduces the number of restriction endonuclease sites.

87-96. (Canceled).

97. (New) The synthetic nucleic acid molecule of claim 1, wherein the synthetic nucleic acid molecule is SEQ ID NO: 9, SEQ ID NO: 16, SEQ ID NO: 18, SEQ ID NO: 297, SEQ ID NO: 299, SEQ ID NO: 301 or a fragment of at least one of SEQ ID NO: 9, SEQ ID NO: 16, SEQ ID NO: 18, SEQ ID NO: 297, SEQ ID NO: 299, or SEQ ID NO: 301.